

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A monitor comprising:

a first sensor which senses a magnitude of power being consumed by a site facility, said site facility comprising at least one main panel bus, at least one external power line electrically connecting said at least one main panel bus to at least one external power source, at least one energy-producing system having at least one energy-producing system bus, at least one first internal power line electrically connecting said at least one main panel bus to said at least one energy-producing system bus, at least one critical load sub-panel bus, at least one second internal power line electrically connecting said at least one energy-producing system bus to said at least one critical load sub-panel bus;

said first sensor comprising at least one first sub-sensor and at least one second sub-sensor;

said first sub-sensor sensing a current passing through said at least one external power line;

said second sub-sensor sensing a net current passing through a combination comprising said at least one first internal power line and said at least one second internal power line; and

a second sensor which senses a magnitude of power being produced by said at least one energy-producing system;

said second sensor comprising at least one third sub-sensor, said third sub-sensor sensing said net current passing through said combination comprising said at least one first internal power line and said at least one second internal power line.

2. (original) A monitor as recited in claim 1, wherein:

said first sub-sensor comprises at least a first transformer positioned around said at least one external power line;

said second sub-sensor comprises at least a second transformer positioned around said at least one first internal power line and said at least one second internal power line; and

said third sub-sensor comprises at least a third transformer positioned around said at least one first internal power line and said at least one second internal power line.

3. (original) A monitor as recited in claim 2, wherein:

said first transformer produces a first signal having a voltage which is proportional to said current passing through said at least one external power line;

said second transformer produces a second signal having a voltage which is proportional to said net current flowing through said combination comprising said at least one first internal power line and said at least one second internal power line; and

said third transformer produces a third signal having a voltage which is proportional to said net current flowing through said combination comprising said at least one first internal power line and said at least one second internal power line;

said monitor further comprises at least one line voltage line which carries a line voltage signal having a voltage which is proportional to a voltage flowing through said at

least one external power line, said at least one first internal power line and said at least one second internal power line; and

said monitor further comprises at least one transducer, said at least one transducer comprising at least one circuit in which at least said first transformer and said second transformer are connected in series.

4. (currently amended) A monitor as recited in claim 31, further comprising a display device comprising at least one site facility consumption display area in which an indication of said magnitude of power being consumed by said site facility is displayed, and at least one energy-producing system production display area in which an indication of said magnitude of power being produced by said at least one energy-producing system is displayed.

5. (original) A monitor as recited in claim 4, wherein said at least one transducer sends to said display device a first series of electronic pulses and a second series of electronic pulses, said first series of electronic pulses having a frequency which is indicative of said magnitude of power being consumed by said site facility, and said second series of electronic pulses having a frequency which is indicative of said magnitude of power being produced by said at least one energy-producing system.

6. (original) A monitor as recited in claim 3, further comprising a display device comprising at least one site facility consumption display area in which an indication of energy consumed by said site facility over a period of time is displayed, and at least one energy-producing system production display area in which an indication of energy produced by said at least one energy-producing system over a period of time is displayed.

7. (original) A monitor as recited in claim 6, wherein said at least one transducer sends to said display device a first series of electronic pulses and a second series of electronic pulses, a quantity of pulses in said first series of electronic pulses over a period of time being indicative of a quantity of energy consumed by said site facility over said period of time, and a quantity of pulses in said second series of electronic pulses over said period of time being indicative of a quantity of energy produced by said at least one energy-producing system in said period of time.

8. (cancelled)

9. (original) A monitor as recited in claim 3, further comprising a display device comprising at least one site facility consumption display area and at least one energy-producing system production display area,

said display device further comprising a first switch which, when pressed, toggles between a setting where an indication of said magnitude of power being consumed by said site facility is displayed in said site facility consumption display area and a setting where an indication of energy consumed by said site facility over a period of time is displayed in said site facility consumption display area; and

said display device further comprising a second switch which, when pressed, toggles between a setting where an indication of said magnitude of power being produced by said energy-producing system is displayed in said energy-producing system production display area and a setting where an indication of energy produced by said energy-producing system over a period of time is displayed in said energy-producing system production display area.

Claims 10-12: (cancelled)

13. (original) A monitor as recited in claim 1, further comprising a display device comprising at least one site facility consumption display area in which an indication of energy consumed by said site facility over a period of time is displayed, and at least one energy-producing system production display area in which an indication of energy produced by said at least one energy-producing system over a period of time is displayed.

14. (cancelled)

15. (original) A monitor as recited in claim 1, further comprising a display device comprising at least one site facility consumption display area and at least one energy-producing system production display area,

said display device further comprising a first switch which, when pressed, toggles between a setting where an indication of said magnitude of power being consumed by said site facility is displayed in said site facility consumption display area and a setting where an indication of energy consumed by said site facility over a period of time is displayed in said site facility consumption display area; and

said display device further comprising a second switch which, when pressed, toggles between a setting where an indication of said magnitude of power being produced by said energy-producing system is displayed in said energy-producing system production display area and a setting where an indication of energy produced by said energy-producing system over a period of time is displayed in said energy-producing system production display area.

16. (cancelled)

17. (currently amended) A monitor as recited in claim 1, further comprising at least a second external power line and at least a second main panel bus,

said second external power line electrically connecting said second main panel bus to at least one external power source;

said first sensor comprising at least one fourth sub-sensor, said at least one fourth sub-sensor sensing a current passing through said second external power line,

said fourth sub-sensor comprising a fourth transformer positioned around said second external power line,

said monitor further comprising at least a second energy-producing system, at least a second critical load sub-panel bus, at least one third internal power line, and at least one fourth internal power line,

said third internal power line electrically connecting said second main panel bus to said second energy-producing system bus, said at least one fourth internal power line electrically connecting said second energy-producing system bus to said second critical load sub-panel bus.

Claims 18-19: (cancelled)

20. (currently amended) A monitor as recited in claim ~~19~~17, wherein:

said first sensor further comprises at least one fourth sub-sensor and at least one fifth sub-sensor, said at least one fourth sub-sensor sensing current passing through said second external power line, said at least one fifth sub-sensor sensing current passing through a

combination comprising said at least one third internal power line and said at least one fourth internal power line;

said second sensor further comprises at least one sixth sub-sensor, said at least one sixth sub-sensor sensing current passing through said combination comprising said at least one third internal power line and said at least one fourth internal power line.

21. (original) A monitor as recited in claim 20, wherein:

said first sub-sensor comprises at least a first transformer positioned around said at least one external power line;

said second sub-sensor comprises at least a second transformer positioned around said at least one first internal power line and said at least one second internal power line;

said third sub-sensor comprises at least a third transformer positioned around said at least one first internal power line and said at least one second internal power line;

said fourth sub-sensor comprises at least a fourth transformer positioned around said second external power line;

said fifth sub-sensor comprises at least a fifth transformer positioned around said at least one third internal power line and said at least one fourth internal power line;

said sixth sub-sensor comprises at least a sixth transformer positioned around said at least one third internal power line and said at least one fourth internal power line.

22. (original) A monitor as recited in claim 21, wherein:

said first transformer produces a first signal having a voltage which is proportional to said current passing through said at least one external power line;

said second transformer produces a second signal having a voltage which is proportional to said net current flowing through said combination comprising said at least one first internal power line and said at least one second internal power line;

said third transformer produces a third signal having a voltage which is proportional to said net current flowing through said combination comprising said at least one first internal power line and said at least one second internal power line;

said fourth transformer produces a fourth signal having a voltage which is proportional to said current passing through said second external power line;

said fifth transformer produces a fifth signal having a voltage which is proportional to said net current flowing through said combination comprising said at least one third internal power line and said at least one fourth internal power line; and

said sixth transformer produces a sixth signal having a voltage which is proportional to said net current flowing through said combination comprising said at least one third internal power line and said at least one fourth internal power line;

said monitor further comprises at least one line voltage line which carries a line voltage signal having a voltage which is proportional to a voltage flowing through at least one line selected from the group consisting of said at least one external power line, said at least one first internal power line, said at least one second internal power line, said second external power line, said at least one third internal power line and said at least one fourth internal power line; and

said monitor further comprises at least one transducer, said at least one transducer comprising at least a first circuit in which at least said first transformer, said second transformer, said fourth transformer and said fifth transformer are connected in series and a

second circuit in which at least said third transformer and said sixth transformer are connected in series.

Claims 23-31: (cancelled)

32. (original) A facility comprising:

at least one main panel bus;

at least one external power line electrically connecting said at least one main panel bus to at least one external power source;

at least one energy-producing system having at least one energy-producing system bus;

at least one first internal power line electrically connecting said at least one main panel bus to said at least one energy-producing system bus;

at least one critical load sub-panel bus;

at least one second internal power line electrically connecting said at least one energy-producing system bus to said at least one critical load sub-panel bus;

a first sensor which senses a magnitude of power being consumed by said facility; and

a second sensor which senses a magnitude of power being produced by said at least one energy-producing system,

said first sensor comprising at least one first sub-sensor and at least one second sub-sensor;

said first sub-sensor sensing a current passing through said at least one external power line;

said second sub-sensor sensing a net current passing through a combination comprising said at least one first internal power line and said at least one second internal power line;

said second sensor comprising at least one third sub-sensor, said third sub-sensor sensing said net current passing through said combination comprising said at least one first internal power line and said at least one second internal power line.

Claims 33-62: (cancelled)

63. (original) A method of sensing power in a site facility, comprising:

sensing a magnitude of power being consumed by a site facility by:

sensing current passing through at least one external power line, said at least one external power line electrically connecting at least one main panel bus to at least one external power source, and

sensing net current passing through a combination comprising at least one first internal power line and at least one second internal power line, said at least one first internal power line electrically connecting said at least one main panel bus to at least one energy-producing system bus, said at least one second internal power line electrically connecting said at least one energy-producing system bus to at least one critical load sub-panel bus; and

sensing a magnitude of power being produced by said at least one energy-producing system by:

sensing said net current passing through said combination comprising said at least one first internal power line and said at least one second internal power line.

Claims 64-78: (cancelled)

79. (currently amended) A display device comprising:

at least one site facility consumption display area in which an indication of a magnitude of power and/or energy being consumed by a site facility is displayed, and at least one energy-producing system production display area in which an indication of a magnitude of power and/or energy being produced by at least one energy-producing system is displayed.

Claims 80-83: (cancelled)

84. (currently amended) A display device as recited in claim 79, wherein said display device comprisescomprising:

at least one site facility consumption display area;

at least one energy-producing system production display area; and

a first switch which, when pressed, toggles between a setting where an indication of a magnitude of power being consumed by a site facility is displayed in said site facility consumption display area and a setting where an indication of energy consumed by said site facility over a period of time is displayed in said site facility consumption display area; and

a second switch which, when pressed, toggles between a setting where an indication of a magnitude of power being produced by said energy-producing system is displayed in said

energy-producing system production display area and a setting where an indication of energy produced by said energy-producing system over a period of time is displayed in said energy-producing system production display area.

Claims 85-89: (cancelled)

90. (original) A monitor comprising:

a first sensor which senses a magnitude of a first net current passing through at least a first power line and which generates a first signal having a voltage which is proportional to said first net current;

a second sensor which senses a magnitude of a second net current passing through at least a second power line and which generates a second signal having a voltage which is proportional to said second net current; and

a transducer comprising at least one circuit in which said first sensor and said second sensor are connected in series.

91. (cancelled)

92. (original) A monitor comprising:

a first sensor which senses a magnitude of power being consumed by a site facility, said site facility comprising at least one main panel bus, at least one external power line electrically connecting said at least one main panel bus to at least one external power source, at least one energy-producing system having at least one energy-producing system bus, at least one first internal power line electrically connecting said at least one main panel bus to

said at least one energy-producing system bus;

said first sensor comprising at least one first sub-sensor and at least one second sub-sensor;

said first sub-sensor sensing a current passing through said at least one external power line;

said second sub-sensor sensing a current passing through said at least one first internal power line; and

a second sensor which senses a magnitude of power being produced by said at least one energy-producing system;

said second sensor comprising at least one third sub-sensor, said third sub-sensor sensing said current passing through said at least one first internal power line.

Claims 93-97: (cancelled)